

Dating by the Rubidium-Strontium Method Using
Spectroscopic Analysis with a Volta Luminescence
Light Source, by Heinz Kocher, 8 p.

GERMAN, per, ~~Zeit Angew Physik~~, 1958, Vol X,
No 3, pp 150-155.

ATB-97L32G

Sci
Mar 60
Vol 2, No 11

109,661

On the Mechanism of Wire Explosions, by Ewald,
Funfer, Martin Keilhacker, Gunther Lehner, 15 p.

GERMAN, per, Zeit Angew Phys, 1958, Vol X, No 4,
pp 157-162.

SLA 59-20472

Sci
Mar 60
Vol 2, No 12

109,267

A New Method of Plasma Generation for Ion Sources,
by A. Ziegler, 6 pp.

GERMAN, per, Z Angew Phys, Vol X, 1958, pp 185-186.

AEC UCEL-Trans-589(L)

54A 61 137

Sci - Phys
19 Jan 61

137,337

Spectroscopy in the Far Infra-Red Through Interference
Modulation, by L. Genzel, R. Weber, 12 pp.
GERMAN, par, Z. Fuer Angewandte Physik, Vol X, No 4,
1958, pp 195-199.

Amer Meteorol Soc
AF Cambridge Res Center

Sci - Phys

Aug 60

121,349

Proepstl, Georg and Zielasek, Gotthold.
DISTRIBUTION OF ANTIMONY IN QUENCHED Ge-Sb
PREALLOYS. [1963] 14p. (3 figs. omitted).
Order from SLA \$1.60

63-14006

Trans. of Zeitschrift für Angewandte Physik (West
Germany) 1958, v. 10 (no. 5) p. 201-204.

DESCRIPTORS: *Antimony, Germanium alloys, *An-
timony alloys, Quenching (Cooling), *Semiconductors,
*Germanium, Single crystals, Autoradiography

(Physics--Solid State, TT, v. 10, no. 4)

63-14006

I. Proepstl, G.
II. Zielasek, G.

Office of Technical Services

Condensation of Mercury Vapor on Cooled Surfaces,
by Helmuth Walther, 12 pp.
GERMAN, per, Z fuer Angewandte Physik, Vol X, No 6,
1958, pp 272-277. 9222988
AEC-ANL-Tr-28

Sci-Phys
Aug 64

265,141

Results of Investigations of the Recognizability
of Small Details on a Television Screen, by F. Below,
W. Kroebe, H. Springer, 28 pp.

GERMAN, por, Z. fur Angewandte Physik, Vol X, No 6,
1958, pp 277-285.

SIA 60-14075

Sci

OTS, Vol III, No 7

133,067

Nov 60

On Resolving Power of Scintillation Multipliers
and Effect of Various Parameters on it, by
P. Gorlich, A. Kroha, et. al, 13 pp.

GERMAN, per, Zeit Angew. Phys, Vol X, 1958,
pp 303-309.

AEC Tr 3532

Sci - Phys
Mar 59

82,893

the visual properties of the human eye in relation
to the Problem of Judging the Quality of
Projected and Television Images, by W. KroebeL,
F. Arp, H. Baumeister, 29 pp.

GERMAN, per, Z fur Angewandte Physik, Vol X,
No 7, 1958, pp 309-317.

SLA 6A-14324

Sci
Jan 62
Vol III, No 10

181, 287

Statistical Observations on Measurements of
Visual Properties of the Human Eye, by
Ferdinand Arp, 11 pp.

~~XXXXX~~ GERMAN, per, Z fur Angewandte Physik, Vol X,
No 7, 1958, pp 317-320.

4
SLA 60-14560

Sci
Feb 62
Vol III, No 11

184,704

The Perception of Image Details of Television
Images, by W. KroebeL,

GERMAN, par, Zeitschrift fuer Angewandte Physik,
~~Vol. 11, No. 14~~ (4), July 1958, pp 320-327.

V/A 907

ERDL, Ft Belvoir
T-1131

Sci
Jun 61

158,018

The HIGH Properties of Photographic Coatings
Subjected to Electron Radiation, by
H. Treloar, R. Klein, 29 pp.

GERMAN, per, Z. Angew Phys, Vol X, 1958,
pp 337-346.

AEC-Tr-3686

SL: 59-10471

Sci - *Phys*

Jul 59

92,070

Some Properties of Thin Barium-Strontium Titanate
Single Crystal Films Evaporated in an Electric
Field, by Alexander Moll, 9 p.

GERMAN,, per, Zeit fur Angew Physik, 1958, Vol X,
No 9, pp 410-416.

BLA 59-17741

Sci
Feb 60
Vol 2, No 10

109,122

Measurement of Volta Potentials with the Aid
of the Rotating Armature Method, by W. Sch...fs,
8 pp.

GERMAN, per, Z fur Angewandte Physi Vol X, 5
No 9, 1958, pp 424-428.

AMS 951283

Sci-Electric

Jun '59

OTS I, 10

89,705

Schumann, Winfried Otto.
PROPAGATION OF LONG ELECTRICAL WAVES IN
A MAGNETIZED PLASMA AND THEIR PASSAGE
THROUGH PLASMA LAYERS. [1962] 17p. 14 refs.
Order from SLA \$1.60 62-18276

Trans. of Zeitschrift für Angewandte Physik (West
Germany) 1958, v. 10, no. 9, p. 428-433.

DESCRIPTORS: *Electromagnetic waves, Propagation,
Magnetic fields, *Plasma physics, Damping.

(Physics--Wave Propagation, TT, v. 9, no. 10)

62-18276

I. Schumann, W. O.

Recent Developments in Scintillation Counters,
by W. Hanle, H. Schneider,

GERMAN, per, Zeit für Angew. Physik, Vol X, No 9,
pp 228-248. 1958

428-448

C.S.I.R.O.
Chief Librarian

Sci

May 60

115,795

Energy and Power Problems in Linear Accelerators,
by Max Wutz, 11 pp.

GERMAN, per, Zeitschrift für Angewandte Physik,

Vol 10, 1958, pp 268-272. P911147067

AEC ANL Tr-430

324,433

Sci - Nuclear Science

May 67

Phase Coorelation Between Ultrasonic Pressure
and Sonoluminescence, by W. U. Wagner.
GERMAN, per, Zeit Angew Phys, Vol 10, 1958,
pp 445-452.
AEC-NP-tr-1808

Sci-Phys
Aug 69

390,004

62-16692

I. Waidelich, W.

Waidelich, Wilhelm.
RELATIONSHIP BETWEEN THE STRUCTURE OF
SILVER BROMIDE GRAINS AND THE SENSITIVITY
OF PHOTOGRAPHIC EMULSIONS. [1962] 21p. (refs.
omitted).

Order from SLA \$2.60

62-16692

Trans. of Zeitschrift für Angewandte Physik (West
Germany) 1958, v. 10, [no. 11] p. 525-531.

DESCRIPTORS: Photographic emulsions, Photographic
paper, Photographic film, *Silver compounds, *Bro-
mides, *Crystal structure, X-ray spectroscopy,
Sensitivity

By precision measurements of the half-value width of
Debye-Scherrer lines of photographic emulsion grains,
the sizes of the coherent grid ranges were determined.
There is a relation between the size of coherent ranges
and sensitivity: The higher the sensitivity is, the
(Materials--Photographic, TT, v. 8, no. 7) (over)

Office of Technical Services

determination of the Neutron Emission of a
Neutron Source, by P. Wenderer.
GERMAN, per, Zeit Angew Phys, Vol 10, 1958,
pp 537-546.
AEC-ANL-Trans-529

Sci-Phys
Jan 68

348,779

Determination of Neutron Emission of a Neutron
Source, by P. Wunderer, 22 pp.

GERMAN, per, Z fuer Angewandte Physik, Vol X,
No 12, 1958, pp 537-546. 9093661

A.C.S.I.L. No 1236

Sci - Nuc Phys

Apr 62

191,528

CEA-tr-A-730 (Rpt: UNCLASSIFIED)
DÉTERMINATION DE L'ÉMISSION NEUTRON-
IQUE D'UNE SOURCE DE NEUTRONS. (De-
termination of the Neutron Emission of A
Neutron Source). P. Wunderer. Translated
into French from Z. angew. Phys. 12, 537-46
(1958). 36p. 12/6/60. Nonproject.

NSA

C

Interference of X-Rays on Evaporated Aluminum
Layers, by W. Hink, W. Petzold, 17 pp.

GERMAN, par, Z. fuer ~~DEH~~ Angew Physik,
Vol X, No 12, 1958, pp 553-562.

ATS-923-G-J
ATS-82M410

Sci
Vol IV, No 7
Apr 62

193, 838

Contact Resistance and Contact Surface, by
K. Millian, W. Rieder.

GERMAN, per, Z. fuer Angewandte Physik,
Vol VIII, No 1, 1959, pp 28-34.

CSIRO

Sci - γ Phys
Aug 62

207,260

Investigations on Replacing the Subjective Picture
Quality Determination by a Physical Criterion,
by Werner Kroebel, George Moll.

GERMAN, per, Zeitschrift Fuer Angewandte Physik,
Vol XI, No 1, Jan 1959, pp 27-35. 9661812.

ATTC MEL 396/1-2

Sci - Phys
Jun 61

155,553

Investigation of the High Frequency Spectrum of
Periodic Discharges, by W. Heintz.

GERMAN, per, Z Angew Physik, Vol XI, No 2, 1959,
pp 51-56.

NYOC TR-848

Sci - Electronics
Jan 61

136,418

Developments in the Electron-Accumulating Mass
Spectrometry of Polyatomic Molecules, by
Manfred von Ardenne, 30 pp.

GERMAN, per, Zeit fur Angew Physik, Vol XI,
No 4, 1959, pp 121-131. 9661912

CS 11/6/61

ATIC MCL-818/1

Sci - Electron

Jul 61

152, 496

Observations on Wire Explosions, by Werner Schaafs,
5 p.

GERMAN, per, Zeit Angew Physik, 1959, Vol XI, No 2,
pp 63-65.

SLA 59-20471

Sci
Mar 60
Vol 2, No 12

109,270

The Application of the Curie-Point of
Ferrites to Temperature Control, by Harald
Straubel, 9 p.

GERMAN, per, Zeit fur Angewandte Physik, 1959,
Vol XI, No 5, pp 172-174.

SLA 59-17735

Sci
Jan 60
Vol 2, No 8

105,555

Elastic Properties of Artificial Graphite,
by R. Arnold.

GERMAN, per, Z Angewandte Physik, Vol XI,
No 5, 1959, pp 179-183.

RAE 880

Sci - Chem

Jul 60

120,024

The Physical Limits of the Elimination of Scattered
X-Rays with the Bucky Grid, by Karl H. Reiss,
11 p.

GERMAN, per, Zeit Angew Physik, 1959, Vol XI, No 5,
pp 184-188.

SLA 59-20015

Sci
Feb 60
Vol 2, No 10

108,817

Hydromagnetic Waves in Plasma, by
Winfried Otto Schumann, 15 pp.
GERMAN, per, Z. fuer Angewandte Physik, Vol XI, No 47,
1959, pp 259-264. 9695564
Amer Meteorol Soc
T-G-228

Sci - Phys
Jan 65

270,918

Atmospherics Geringster Frequenzen, by Herbert Konig,
30 pp.
GERMAN, per, ~~Z fuer Angewandte Physik~~, Vol XI, No 7,
1959, pp 264-274. 9695569
Amer Meteorol Soc
T-G-229

Sci - Phys
Jan 65

270,919

Phase Correlation Between Alternating Sound Wave
Pressure and Sonoluminescence, by P. Gunther,
E. Heim.

GERMAN, per. Zeitschrift für angewandte Physik.
Vol 11, No 7, 1959. pp 274-277.

P911340367

AEC NP-TR-1568

Sci-Nucl Sci
Nov 67

343,645

Temperature Dependence of Conductivity of
Amorphous Germanium Vapor-Deposited Layers, by
Von Hans Richter and Richard Schneider, 19 pp.

GERMAN, per, Zeitschrift fur Angewandte Physik,
Vol XI, No 7, 1959, pp 277-283.

ACSI H-8888

ID 2164462

SLA - 61-10319

154720

Sci - Physics

Jun 61

Continuous Flow of Liquid Polar
Dielectric in Inhomogeneous Electric
Field, by Gunther H. Krawinkel.
GERMAN, per, Zeitschrift fur Angewandte
Physik, Vol 11, 1959, pp 305-315.
Dept Int. Lib.
ACS E57 No 133

Sci/Physronics
Aug 65

288,698

Theoretical Investigations of the Image Defects in
Electron Diffraction Patterns, by H. Növen, F. Lenz.
GERMAN, per, Z fuer Angewandte Physik, Vol XI,
No 10, 1959, pp 375-380.
GB/4/T/1650

Sci - Phys
Apr 64

253,363

Dietrich, Isolde and Honrath-Barkhausen, Marlene.
FORMATION ON ELECTRIC CONTACTS OF RE-
SISTANCE-INCREASING LAYERS OF ORGANIC
ORIGIN (Zur Bildung Widerstandserhöhender Beläge
Organischen Ursprungs auf Elektrischen Kontakten).
[1963] [18] p. (foreign text included) 3 refs.

Order from SLA \$1.60

63-16308

81.10 (944) TT-63-20922
Trans. of Zeit[schrift] für Angewandte Physik (West
Germany) 1959, v. 11, no. 10, p. 399-403.

DESCRIPTORS: *Films, Resistance (Electrical).
*Organic compounds, Organic coatings, Naphthalenes,
*Electric switches, Sliding contacts, Electric currents,
Electric discharges, Tracer studies, Vapors, Copper,
Gold, Gold alloys, Iridium, Iridium alloys, Iron alloys,
Iridium, Nickel, Palladium, Platinum, Platinum alloys,
Rhodium, Ruthenium, Silver, Silver alloys, Tungsten,
Oxides, Adsorption, Measurement.

(Physics--Electricity, TT, v. 10, no. 5)

(over)

63-16308

I. Dietrich, I.
II. Honrath-Barkhausen, M.

Office of Technical Services

62-10330

Strosche, Hermann.
SIMPLE DOPING EQUIPMENT FOR VACUUM VAPOR
DEPOSITION. [1961] 7p. 8 refs.
Order from SLA \$1.10

62-10330

Trans. of Zeitschrift fur Angewandte Physik
(West Germany) 1959, v. 11, no. 11, p. 441-443.

DESCRIPTORS: Thin films, *Vaporization, *Vacuum
apparatus, Chemical elements, Processing.

A doping apparatus is described which permits the
production of vaporized layers of several components.
This doping apparatus consists of a rotor equipped
with two or more vaporizers and permits great varia-
tional possibilities for the formation of the total layer.
(Author)

(Metallurgy, TT, v. 7, no. 9)

1. Title: Doping equipment
1. Strosche, H.

Office of Technical Services

The X-Ray Element, by Bernard Hess.

GERMAN, per, Zeitschrift fuer Angewandte Physik, Vol 11,
No 12, Dec 1959, pp 449-453.

*AFCRL

Sept 72

Report on the Surface Energies of Metal Crystals,
by I. Pfeiffer.
GERMAN, per, Z fuer angewandte Physik, Vol XI,
No 12, 1959, pp 477-484.
NASA TT F-8474

Sci - M7M

Mar 64

U.S. GOVERNMENT ONLY

251,949

Title Unknown, by H. Bruner, K.
Kietmann.
GEFMAN, per (Zeit. fur Angewandte)
Physiologie, Vol XVIII, No 1, pp
1-12, 1959
*NASA TT F-9737

Sci-Phys
Oct 65

Mechanism of the Explosive Vaporisation of Copper
Wires by Means of Very Strong Current Impulses and
the Behaviour of the Copper at High Pressures
and Temperatures Which Occur, by Martin Keilhacker,
28 pp.
GERMAN, per, Z fuer Angewandte Physik, Vol XII,
No 2, 1960, pp 49-59.
AERE-Harwell-Tr-989

Sci-Phys
Jun 64

260,946

GB/45/11/3/5/1647

Optical Pyrometry in Polarized Light,
by W. Pepperhoff.

GERMAN, per, Z. Angew. Physik, Vol XII, No 4,
1960, pp 168-171.

RAE 939

Sci - Phys

168, 614

Sep 61

63-14014

Michelitsch, Michael.
WETTING AND ALLOYING STUDIES ON GERMA-
NIUM. [1963] 17p. 7 refs.
Order from SLA \$1.60

63-14014

Trans. of Zeitschrift für Angewandte Physik (West
Germany) 1960, v. 12, no. 4, p. 180-184.

DESCRIPTORS: *Germanium, Surface-active sub-
stances, *Indium, Indium alloys, *Semiconductors,
Halides, Antimony, Aluminum alloys, Gallium alloys

A report is given on a simple, readily reproducible
wetting process which is suitable for wetting germanium
at elevated temperatures with indium and its alloys. It
essentially consists in that the oxide films on the start-
ing materials are replaced by halide films and these
are then reduced in a hydrogen atmosphere at moder-
ately high temperatures. 'Pure' material surfaces are
thus obtained, at least at the moment of contact be-
(Physics--Solid State, TT, v. 10, no. 4) (over)

1. Michelitsch, M.

Office of Technical Services

Une Representation Intuitive de la π Rotation
Coherente de l'Aimantation de Couches Ferro-
magnetiques Minces, by E. Feldtkeller, 17 pp.

GERMAN, to FRENCH, per, Z. Angew Phys,
Vol XII, No 6, 1960, pp 257-261. 9069358

~~XXXXXXXXXX~~ CEA A-1069
Reverse Translation

Sci
Dec 62

62-10095

Roder, Oskar.
LATTICE FORMATION IN EVAPORATED TITANATE
LAYERS [1961] [8]p. 4 refs.
Order from SLA \$1.10

62-10095

Trans. of Zeitschrift für Angewandte Physik (West
Germany) 1960, v. 12, no. 7, p. 323-324.

DESCRIPTORS: *Barium compounds, *Strontium
compounds, *Titanates, Evaporation, Crystals,
*Lattices, Temperature, Growth.

The purpose of this paper was to clarify the conditions
under which titanates condensed from the vapor phase
form a crystal lattice. The titanates were deposited in
high vacuo on glass, quartz or mica and later annealed
in air up to 1000°C. After annealing the layers were
scraped off the substrate and analyzed in powder form
by the Debye-Scherrer method. It appeared that for
lattice formation temperatures of at least 400°C are
necessary. (Author)

1. Title: Debye-Scherrer
method
1. Roder, O.

(Physics--Solid State,
TT, v. 7, no. 9)

Office of Technical Services

Lattice Constant Measurement From Broadened
X-Ray Reflections, by G. K. Schmidt.

GERMAN, per, Zeitschrift fuer Angewandte Physik,
Vol XII, No 8, 1960, pp 347-351.

SB/256/T 1244

Sci- Phys
Mar 63

225, 336

61-18864

Buchmann, Franz, Höfert, Manfred, and Röhler,
Rainer.

RAPID RESPONSE MEASUREMENT OF DOSE RATE
IN COMMERCIAL X-RAY APPARATUS. [1961] 6p.
4 refs.

Order from SLA \$1.10

61-18864

Trans. of Zeitschrift für Angewandte Physik
(West Germany) 1960, v. 12, no. 8, p. 351-353.

DESCRIPTORS: Dose rate, Measurement, *X-rays,
Scintillation counters, *Radiation instruments.

An apparatus consisting of a chamber, which contains
a scintillation liquid and which is connected to a
photomultiplier, is suitable for an approximate dose-
rate measurement of x-radiation within the range of
35 to 100 Kv. Inasmuch as the reading is taken with
an electron beam oscillograph with a minute response
(Nuclear Physics--Instruments, TT, v. 7, no. 1) (over)

I. Buchmann, F.
II. Höfert, M.
III. Röhler, R.

Office of Technical Services

The Effect on the Gas Flow of an Electric Arc
Burning in a Nozzle, by K. Zuoekler,

GERMAN, per, Z Angew Phys, Vol XII, No XX 12,
1960, pp 567-575.

T RAE 973

200,901

Sci - Phys

Jun 62

Schultze, K.
THE BEHAVIOR OF DIFFERENT LIQUIDS IN ELEC-
TROSTATIC ATOMIZATION. [Feb 63] 10p.
Order from ATS \$14.00 ATS-30P65G

Trans. of Z[eitschrift für] Angew[andte] Phys[ik] (West
Germany) 1961, v. 13, no. 1, p. 11-16.

DESCRIPTORS: Liquids, Behavior, *Atomization,
*Electrostatics.

(Physics, TT, v. 9, no. 7)

63-12771

- I. Schultze, K.
- II. ATS-30P65G
- III. Associated Technical
Services, Inc.,
East Orange, N. J.

ATS-877-GJ

Office of Technical Services

R-1018

The Behaviour of Different Liquids During Electrostatic
Atomization, by K. Schultze

GERMAN, per, Z. Angew Phys, Vol XIII, No 1, 1961,
pp 11-16.

*JPRS/Picatinny Arsenal

Sci - Phys
Oct 62

Production of Strong Molecular Beams in High
Vacua by Means of Jets, by Gerhard Becker, 13 pp.

GERMAN, per, Zeitschrift fuer Angewandte Physik,
Vol XIII, No 2, 1961, pp 59-64. (9208230)

AEC-Tr-5695

Sci - Phys

Jun 63

834,297

Influence d'un ecroissage et d'un traitement thermique
sur les proprietes electriques et magnetiques des
alliages Fe-A/, by G. Rassmann, H. Wich.

+ FRENCH
GERMAN, per, Z. Angew., Phys., Vol XIII, No 4,
~~1962~~ 1961, pp 172-174. 9203239

Reverse Translation/CEA

Sci

Apr 63

Wagner, Rolf.
ORIENTATIONAL SUPERSTRUCTURE IN SINGLE
Fe-Ni-FERRITE CRYSTALS. [1964] 9p (figs omitted)
4refs
Order from SLA \$1.10

TT-64-10882

Trans. of Zeitschrift für Angewandte Physik (West
Germany) 1961, v. 13, no. 4, p. 187-189.

(Physics--Solid State, TT, v. 11, no. 12)

TT-64-10882

L. Wagner, R.

Office of Technical Services

Ross, Erich and Moser, Erich.
THE TEMPERATURE-DEPENDENCE OF THE
INITIAL PERMEABILITY IN HIGHLY PERMEABLE
MANGANESE-ZINC-FERRITES. [1961] 8p. (Foot-
notes 9 figs. omitted).
Order from SLA \$1. 10

62-10325

Trans. of Zeitschrift für Angewandte (West
Germany) 1961, v. 13, no. 5, p. 247-250.

DESCRIPTORS: *Manganese compounds, *Spinel,
*Ferrites, Permeability, Temperature, Manufac-
turing methods, Minerals, Zinc.

In highly permeable manganese-zinc ferrites we find
frequently, in addition to the maximum of the initial
permeability, close to the Curie-temperature, sec-
ondary maximum for reasons which are still un-
known. These maxima move with increasing zinc-
(Chemistry--Physical, TT, v. 7, no. 8) (Over)

62-10325

I. Ross, E.
II. Moser, E.

Office of Technical Services

The Velocity of Ascent of Gas Bubbles in
Liquids of Different Viscosity and Surface
Tension, by Erwin Coester.

GERMAN, per, Zeit fur Angewandte Physik,
Vol XIII, No 5, 1961, pp 244-259. 9696503
DDC RSIC 375

Erwin Coester

Sci-Phys
Nov 65

292,871

62-10761

Gobrecht, Heinrich, Franke, Karl-Heinz and others.
AN ALTERNATING CURRENT; APPARATUS FOR
THE MEASURING OF THE HALL EFFECT AND OF
THE CONDUCTIVITY OF LAYERS OF SEMICON-
DUCTORS WITH A HIGH OHMIC RESISTANCE.
[1961] 26p. (11 figs. 10 refs. omitted). 2 refs.
Order from SLA \$2.60 62-10761

Trans. of Zeitschrift für Angewandte Physik (West
Germany) 1961, v. 13, no. 6, p. 261-268.

DESCRIPTORS: *Alternating current, *Hall effect,
*Measurement, Semiconductors, Conductivity,
Voltage, Resistance, Electrical equipment.

The apparatus described permits the Hall voltages to
be measured on samples having resistances between
several hundred and about twenty thousand ohms. The
smallest voltage which can be measured is 0.5 micro-
volts. The application of a phase-sensitive rectifier
(Engineering--Electrical, TT, v. 8, no. 2) (over)

I. Gobrecht, H.
II. Franke, K.-H.
III. Title: Apparatus ...

Office of Technical Services

On the Possibility of Constant Control of
Electron Flows in a Rarefied Atmosphere, by
E. Pfender.

GERMAN, per, Zeitschrift fuer Angewandte Physik,
Vol 13, 1961, pp 341-348.

NTC-71-15543-20I

Feb 72

63-18739

Sabban, Klaus.
NON-LINEAR CONTROLLABLE INDUCTANCES MADE
OF THIN MAGNETIC FILMS. [1963] 27p. 3 refs.
Order from SLA \$2.60 63-18739

I. Sabban, K.

Trans. of Zeit[schrift für] Angew[andte] Physik (West
Germany) 1961, v. 13, no. 9, p. 420-425.

DESCRIPTORS: *Films, *Ferromagnetic materials,
*Inductance, Coils, Oscillators, Magnetism, Magnetic
properties, Electrical conductance,

The dependence of the inductance of a coil with a mag-
netizable film on the premagnetization of the film is
calculated. An equivalent circuit is set up for the coil,
consisting of a dissipative parallel oscillating circuit
and an inductance connected in series. The values
(resonance frequency, quality, capacity, conductivity
and inductance) of the parallel oscillating circuit are
functions of the premagnetization. They are repre-
(Physics--Magnetism, TT, v. 10, no. 11) (over)

Office of Technical Services

On the Form of Compression Shocks in Freely
Expanding Gas Jets, by K. Bier.

GERMAN, per, Zeitschrift fuer Angewandte
Physik, Vol 13, 1961, pp 493-500.

NTC-71-15542-01A

AEC M-5196 24pp 9089613

Feb 72

The Magnetic Behaviour of Fe-Al Single Crystals,
by H. Gengnagel.

GERMAN, per, Zeitschrift für Angewandte Physik, Part I,
Vol XIII, Nov 1961, pp 527-534.

BIBI 3143

Sci - Chem m/m
Apr 363

236,770

62-20387

Voigt, Friedrich.

THE INFLUENCE OF THE ADDITION OF COBALT
ON THE FREQUENCY DEPENDENCE OF THE
COMPLEX PERMEABILITY OF Ni Zn - FERRITE.

[1962] 11p. 7 refs.

Order from SLA \$1.60

62-20387

I. Voigt, F.

Trans. of Zeit[schrift] f[ür] Angew[andte] Physik
(West Germany) 1961, v. 13, no. 11, p. 538-541.DESCRIPTORS: *Cobalt, *Permeability (Magnetic),
Frequency, *Nickel compounds, *Zinc compounds,
*Ferrites, Anisotropy, Hysteresis, *Ferromagnetism.

(Physics--Magnetism, TT, v. 9, no. 12)

Office of Technical Services

62-20372

Eberhardt, N.
POSSIBLE SOURCES OF ENERGY OF ION OSCIL-
LATIONS IN A HIGH AND ULTRAHIGH VACUUM.
[1962] 20p. 18 refs.
Order from SLA \$1.60

62-20372

Trans. of Zeitschrift für Angewandte Physik (West
Germany) 1961, v. 13, no. 12, p. 560-565.

DESCRIPTORS: *Ions, *Ionization, *Plasma oscillations,
*Electron tubes, Energy.

Interfering ion plasma oscillations have been observed
repeatedly in various amplifier tubes. Two new
mechanisms for continuous excitation of these oscil-
lations are indicated. One is based on a phase "sorting"
of the particles which oscillate in a potential well with
non-linear law of force and repel mutually. There is
a similarity to the mechanism of the well-known
(Physics--Electronics, TT, v. 10, no. 2) (over)

I. Eberhardt, N.

Office of Technical Services

The Magnetic Behaviour of Fe-Al Single Crystals,
by H. Gengnagel.

GERMAN, per, Zeitschrift für Angewandte Physik,
NEX Part II, Vol XIII, Dec 1961, pp 569-576.

BIBI 3143

Sci - Chem m/m
Apr 63

230,771

Direct Conversion of Heat Into Electric
Energy by Means of Hot-Cathode Tubes Filled
With Rare Gas, by W. Bloss.
GERMAN, per, Zeitschrift fuer Angewandte Physik,
Vol 14, No 1, 1962, pp 1-9.
NTC-71-15541-10A

Feb 72

Direct Conversion of Heat into Electric Energy
by Means of Hot-Cathode Tubes Filled with Rare
Gas, by W. Bloss.
GERMAN, per, Zeitschrift fuer Angewandte Physik,
Vol 14, No 1, 1962, pp 1-9.
NTC 71-15541-10A

Mar 72

63-18929

Seidel, Horst.

A MICROWAVE BRIDGE WITH HETERODYNE RE-
CEPTION FOR ELECTRON SPIN RESONANCE MEAS-
UREMENTS IN THE X-BAND. [1966; 15]p. 3 refs.
Order from SLA \$1.10 63-18929

Trans. of Zeitschrift für Angewandte Physik (West
Germany) 1962, v. 14, no. 1, p. 21-22.

DESCRIPTORS: *Microwave bridges, *Measuring de-
vices (Electrical and electronic), *Electron spin reso-
nance, Microwaves, Klystrons, Frequency modulation,
Design, Measurement, X-band.

A description is given of a microwave system for re-
cording ESR signals; a limit of detection of $N_{min} =$
 3×10^{11} spins is attained with relatively little ex-
pense. A heterodyne system with only one klystron is
used, the heterodyne frequency being produced by mod-
ulation. Modulation of the carrier and frequency stabi-
lization are linked. (Author)

1. Seidel, H.

(Engineering--Electronic, TT,
v. 10, no. 11)
Office of Technical Services

Kornetzki, M.

REMANENCE OF IDEAL MAGNETIZATION (Die
Remanenz der Idealen Magnetisierung). [1963] 14p.
15 refs.

Order from SLA \$1.60

63-18885

Trans. of Zeitschrift f[ur] Angew[andte] Physik (West
Germany) 1962, v. 14, no. 3, p. 53-56.

DESCRIPTORS: Magnetism, *Magnetic fields, *Induct-
ance; Ferromagnetic materials, Magnetic properties.

It is deduced from the Preisach diagram that at low
field strength, the difference between ideal magnetiza-
tion and its remanence is equal, according to the oc-
cupancy function present, either to the magnetization
on the new curve or to the reversible magnetization.
That is, the relative remanence of ideal magnetization
should be greater, the greater the ratio of initial slope
of the ideal magnetization curve to initial permeability
(Physica--Magnetism, IT, v. 10, no. 11) (over)

63-18885

1. Title: Remanence
I. Kornetzki, M.

Office of Technical Services

The Calculation of Maximum Impurities in
Metallic Vapor Deposit by Residual Vacuum
Gases, by H. Gawehn
GERMAN, per, Zeitschrift fuer Angewandte
Physik, Vol 14, 1962, pp 126-129
NTC 71-15272-20L

mar 72

Domain Wall Motion in Thin Ni-Fe Films,
by Simon Middelhoek. GOVERNMENT USE ONLY
GERMAN, per, Z fuer Angewandte Physik, Vol XIV,
No 4, 1962, pp 191-193. 9695510
DDC RSIC-256

Sci - Phys
Jan 65

TT-64-71434

270,699

Wave Propagation Along a Longitudinally
Magnetized Ferrite Rod in an Electrically
Anisotropic Environment, by Ernst Neckenburger,
21 pp.

GERMAN, per, Z fur Angewandte Physik,
Vol XIV, No 5, 1962, pp 282-288.
Navy Tr 3794/NRL 965

MIT/UNLIB LAB (49) A2T-69-633-JTHA

Sci - Phys
May 64

256,977

Schwabe, Gerhard.
MEASUREMENT OF SMALL DIFFUSION DEPTHS IN
SEMICONDUCTOR MATERIALS. [1963] 8p. (refs.
omitted).
Order from SLA \$1.10 63-16546

Trans. of Zeitschrift für Angewandte Physik (West
Germany) 1962 [v. 14] no. 5, p. 297-299.

DESCRIPTORS: *Semiconductors, Materials, Diffusion,
*Crystals, Measurement, Solid State physics,
Germanium.

The accuracy in the measurement of small diffusion
depths in semiconductor materials can be appreciably
heightened by a special grinding technique elaborated
in detail. The method is simple and a few examples
are given. Furthermore, it is shown that the necessary
marking of the diffusion boundary can be applied also to
 $n^+ - n$ junctions by means of a galvanic copper
precipitate. (Author)

63-16546

I. Schwabe, G.

(Physics--Solid State, TT,
v. 10, no. 5)

Office of Technical Services

The Thermal Emission of Metals Into the Half
Space, by H. Klein, ~~COVERED~~ USE ONLY
GERMAN, per, Zeitschrift fur Angewandte Physik,
Vol XIV, No 6, 1962, pp 358-362. P200175267
RSIC-666

Sci-Phys
Jun 67

329,031

Measurement of Very Short Carrier Lifetimes
in Semiconductors, by P. Bauerlein,

6 pp.

GERMAN, per, Zeit fur Ang Phys, Vol XIV,
No 7, 1962, pp 408-412. 9227103

ACSIL/64/409

Sci - Elec

Apr 65

277,899

Metzdorf, Werner.

PHENOMENA DURING SEMI-STATIONARY MAGNETIZING OF THIN LAYERS. [1963] [46]p. 23 refs.
Order from SLA \$4.60

63-18088

Trans. of Zeitschrift für Angewandte Physik (West Germany) 1962, v. 14, no. 7 [p. 412-424].

DESCRIPTORS: *Magnetic properties, *Magneto-optic effect, *Alloys, Iron alloy, Nickel alloy, Anisotropy, Magnetism, Ferromagnetic materials, *Magnetic materials.

The report shows which kind of magnetizing processes occur in the area of the total layer under the influence of slowly increased fields of arbitrary direction and what coercitive force they possess and what factors determine the various processes. (Author)

(Physics--Magnetism, TT, v. 10, no. 9)

63-18088

I. Metzdorf, W.

Office of Technical Services

A Tape-Controlled X-Ray Diffractometer
For the Automatic Measurement of the
X-Ray Intensities of Single Crystals,
by W. Hoppe, E. Berkl, 14pp.

GERMAN, per, Z fur Angewandte Physik,
Vol LXIV, No 7, 1962, pp. 434-437.

SLA 63-14745

Sci-Phys
Nov 63

Device for Measuring Diffuse Skylight With a
Sounding Rocket, by F. Rossler, K. Vollrath.
GERMAN, per, Z fuer Angewandte Physik, Vol XIV,
No 7, 1962, pp 448-452.
NASA TT F-9030

Sci-Phys

Aug 64

U.S. GOVERNMENT ONLY

265,668

Gawehn, Herbert.

A NEW CATHODE SPUTTERING PROCEDURE WITH
RING DISCHARGE PLASMA. [9p] Refs.

Order from SLA \$1.10

TT-64-16954

Trans. of Zeitschrift für Angewandte Physik
(West Germany) 1962, v. 14, no. 8, p. 458-462.

(Physics--Electronics, TT, v. 12, no. 5)

TT-64-16954

L. Gawehn, H.

Office of Technical Services

Bogenschlitz, A. F., Bergmann, F., and Jentzsch, J.
AN OPTICAL METHOD OF MEASURING THE THICK-
NESS OF THIN FILMS. [1963] [22p] 7 refs
Order from SLA \$2.60 TT-63-20580

Trans. of Zeitschrift für Angewandte Physik (West
Germany) 1962, v. 14, no. 8, p. 469-475.
(Abstract available)

DESCRIPTORS: *Semiconducting films, Oxides, Films,
Reflection, Infrared radiation, Thickness, Silicon,
Germanium, Tantalum.

A method is described for the nondestructive measure-
ment of the thickness of thin films transmitting infra-
red light. The process, based on measurements of re-
flection power and the transmission of infrared light,
can be used for film thicknesses from 0.02 to 10 μ m.
Experimentally, the transmission capacity of oxide-
(Physics--Solid State, TT, v. 11, no. 1) (over)

TT-63-20580

I. Bogenschlitz, A. F.
II. Bergmann, F.
III. Jentzsch, J.

Office of Technical Services

Bogenschütz, A. F. and Schütze, H. L.
EVALUATION OF SEMICONDUCTOR SURFACES BY
MEANS OF IR-MEASUREMENTS. [1963] [24p] 20refa
Order from SLA \$2.60 63-20615

Trans. of Zeitschrift für Angewandte Physik (West
Germany) 1962, v. 14, no. 8, p. 475-481.

DESCRIPTORS: *Semiconductors, Surface properties,
*Infrared radiation, Etched crystals, Crystal lattice
defects, Germanium, Silicon.

Since the infrared transmission of semiconductor
specimens is influenced not only by the layer thickness
and the doping but also by the surface condition of the
specimens, infrared measurements may be used for
the investigation of semiconductor surfaces. Pre-
requisite is the exclusion of influences by layer thick-
nesses and dopings. Under favorable experimental
(Physics--Solid State, TT, v. 10, no. 12) (over)

63-20615

I. Bogenschütz, A. F.
II. Schütze, H. L.

Office of Technical Services

Studies of Lattice Defects in Neutron-Irradiated
Lithium Fluoride, by Hans Peisl, 29 pp.

GERMAN, per, Z. Angew. Phys. Vol 14, 1962,
pp 529-536

AEC-UCRL-tr-10251

P911253468-V

Sci/Phy
Oct 68

368,303

The Importance of Compression Shocks in
the Generation of Intensive Molecular
Beams by Means of Nozzles, by K. Bier.
GERMAN, per, Zeitschrift fuer Angewandte Physik,
Vol 14, 1962, pp 658-664.
NTC-71-15540-20G

Feb 72

Krawinkel, G. H.
STUDY OF THE FLOW OF A FEW LIQUID POLAR
DIELECTRICS IN AN INHOMOGENEOUS ELECTRIC
FIELD. [Jan 64] 18p
Order from ATS \$24.65

ATS-OSQ74G

Trans. of Z[eitschrift für] Angew[andte] Phys[ik]
(West Germany) 1962, v. 14, no. 11, p. 681-692.

DESCRIPTORS: Electric fields, *Dielectrics,
Polarization.

ATS 12-1-69 Aug 67

(Physics--Electricity, TT, v. 11, no. 9)

TT-64-12419

I. Krawinkel, G. H.
II. ATS-OSQ74G
III. Associated Technical
Services, Inc.,
East Orange, N. J.

Office of Technical Services

Dietrich, Isolds and Kerps, Dietrich.
MEASUREMENT OF SWITCHING TIME TO DE-
TERMINE THE CRITICAL CURRENT FOR THIN
SUPERCONDUCTIVE LAYERS. [1963] 13p 7refs
Order from SLA \$1.60 TT-64-14631

Trans. of [Zeitschrift für Angewandte Physik] (West
Germany) 1962, v. 14, no. 12, p. 709-713. (Abstract
available)

DESCRIPTORS: *Cryogenics, *Superconductors,
Thickness, Electrical conductance, Transition
temperature, Electric currents.

The current induced transition from the superconductive
to the normal conductive condition is caused by wall
movement at the moment a normally conductive nucleus
appears. For thin layers of simple geometry, an
equation may be derived from the heat balance equation
(Physics--Electricity, TT, v. 11, no. 11) (over)

TT-64-14631

I. Dietrich, I.
II. Kerps, D.

Office of Technical Services

Notes on Superconduction Under the Influence
of High Magnetic Fields and of Great Current
Densities, by C. J. Gorter

GERMAN, per, Zeitschrift fuer Angewandte
Physik, Vol 14, 1962, pp 722-725

HTC 71-15271-20C

mar 72

TT-64-10963

Hoffmann, R. and Mollwo, E.
THE CHANGE OF LUMINESCENCE YIELD AND
ELECTRICAL CONDUCTIVITY OF ZnO BY THE AD-
SORPTION OF OXYGEN. [1963] 5p (figs omitted)
Order from SLA \$1.10 TT-64-10963

I. Hoffmann, R.
II. Mollwo, E.

Trans. of Z[schrift für] Angew[andte] Physik (West
Germany) 1962, v. 14, no. 12, p. 734-738.

(Chemistry--Physical, TT, v. 11, no. 12)

Office of Technical Services

The Complex Resistivity of BaTiO_3 "Cold E
Conductors" as Confirmation of the Barrier-
Layer Model, by W. Heywang, 19pp
GERMAN, per, Zeitschrift fur Angewandte Physik,
Vol 16, 1963, No 1, pp 1-5
SLA TT-64-16837

Sci - Phy
May 67

326,542

Studies of Propagation of Electromagnetic Waves Over
an Absorbent Surface, by Erwin Meyer, Dietmar Eissfeld,
21 pp.

GERMAN, per, Z fuer Angewandte Physik, Vol XV, No 1,
1963, pp 31-39.

Navy Tr 3765/NRL 969

Sci - Electron

Apr 64

255,101

An Instrument Which Can be Used as an X-Ray
Microanalyser, X-Ray Shadow Microscope and
Electron Diffraction Apparatus. Experimental
Investigations in Al-Cu and Ge, by O. Brummer,
~~K. H. Brauer~~ K. H. Brauer.
GERMAN, per, Z fuer Angewandte Physik, Vol XVI,
No 1, 1963, pp 27-37.
BISI 3580

Sci - Phys
May 64

257,013

The Angular Dependence of a Molecular Beam
Produced by a Knudsen Cell, by V. Ruth.
GERMAN, per, Z fur Angewandte Physik,
Vol XVI, 1963, pp 53-55. 9232001
AEC-LA-Tr-65-25

Sci - NS
Mar 66

296,518

Simple Arrangement for the Analysis of Geometric
Data of Beams of Charged Particles, by
M. Fink, et al.
GERMAN, per, Zeitschrift fur Angewandte Physik,
Vol 15, No 2, 1963, pp 112-114.
NASA TT F-11,104

NTC 72-10274-20H

GOVERNMENT USE ONLY

Sci-Phys

Sept 67

341,975

Ion Counting With Allen Multipliers and
Commercial Counters for the Measurement
of Intensity in Mass Spectroscopy, by
H. E. Deske, 7 pp.

GERMANY, per, Zeitschrift für Angewandte Physik, Vol XVI,
No 2, 1963, pp 114-116. 9230338
AEC-EP-Tr-1210

Sci-Phys

apr 65

9230338
278,146

A Small Electrostatic Generator With
Large Charge Carrier Agent, by
Alexander Papkow.
GERMAN, per, Z. Angew Physik, Vol XV,
No 2, 1963, pp 170-171.
Chem Trans Sv No 3120

Sci-Chem
Mar 67

322,111

The Possibilities of Using the 'Kerr-Technik' for
the Observation of Magnetic Regions, by J. Kranz,
A. Hubert.

GERMAN, per, Z fuer Angewandte Physik, Vol XV, No 3,
1963, pp 220-232.

*SLA - A-117

Sci - Phys
Jun 63

Coercive Field Strength of Barium Ferrite Powders,
by G. Heimke.

GERMAN, per, Zeitschrift fuer Angewandte
Physik, Vol 15, 1963, pp 271-272.

NTC-70-13094-20C

Feb 72

Spontaneous Temporal Fluctuations in the Magnetization
of a Ferromagnetic Material, by Heinz Bittel,
Hans Lutgemeier, 10 pp.

GOVERNMENT USE ONLY

GERMAN, per, Zeitschrift fur Angewandte Physik, Vol 15,
No 6, 1963, pp 476-480.

ARM/FSTC/HT-23-1355-71

June 72

Tischer, Manfred.

THE MECHANISM OF EMISSION OF THE BN-CATHODE. [1963] 39p 25refs

Order from SLA \$3.60

TT-64-14624

Trans. of Zeitschrift für Angewandte Physik (West Germany) 1963, v. 15, no. 6, p. 509-518. (Abstract available)

DESCRIPTORS: *Electron tube parts, *Cathodes (Electron tube), *Oxide cathodes, *Barium alloys, *Nickel alloys, Emissivity, Diffusion, Theory.

It is shown that the BN-cathode is an oxide cathode with recuperative properties. Studies showed that the mechanism of the BN-cathode corresponds to that of the genuine dispersion type (L cathode). A calculation is introduced to explain the mechanism of emission of the BN-cathode, based on the depletion layer theory of (Physics--Electronics, TT, v. 11, no. 11) (over)

TT-64-14624

1. Title: BN-cathodes
1. Tischer, M.

Office of Technical Services

TT-64-14587

Hamisch, H. and Binkele, L.
HIGH RESOLUTION FIXATION OF ELECTRON- AND
ION-OPTICAL PICTURES BY CROSSLINKING OR-
GANIC SUBSTANCES. [1963] 12p 12refs
Order from SLA \$1.60

TT-64-14587

Trans. of Zeitschr[ift für] Angewandte Physik
(West Germany) 1963, v. 16, no. 3, p. 145-150.
(Abstract available)

DESCRIPTORS: *Photographic film, *Plastic films,
*Fatty acids, Glycerols, Esters, Chemical bonds,
*Electron optics, *Ion beams, Photographic images,
Resolution.

The change in solubility of a lacquer due to electron- or
ion-bombardment was utilized to record the intensity
distribution in the focal plane of an electron-optical or
ion-optical apparatus. The lacquer relief obtained in
(Materials--Photographic, TT, v. 11, no. 11) (over)

1. Title: Eleostearic acid
glyceride
1. Hamisch, H.
11. Binkele, L.

Office of Technical Services